STANDARDS OF APPRENTICESHIP
adopted by

LOTT ALLIANCE APPRENTICESHIP COMMITTEE
(sponsor)

Skilled Occupational Objective(s):	DOT and/or SOC	Term
CONTROL SYSTEMS TECHNICIAN	**17-3023.02**	**6000 HOURS**
MAINTENANCE TECHNICIAN	**49-9041.00**	**6000 HOURS**
WASTEWATER TREATMENT PLANT OPERATOR	**51-8031.00**	**5000 HOURS**

APPROVED BY
Washington State Apprenticeship and Training Council
REGISTERED WITH
Apprenticeship Section of Specialty Compliance Services Division
Washington State Department Labor and Industries
Post Office Box 44530
Olympia, Washington 98504-4530

APPROVAL:

JANUARY 15, 1981 Initial Approval	JULY 21, 2006 Committee Amended
JULY 21, 2006 Standards Amended (review)	JANUARY 21, 2005 Standards Amended (administrative)
By: MELINDA NICHOLS Chair of Council	By: PATRICK WOOD Secretary of Council

LOTT ALLIANCE APPRENTICESHIP COMMITTEE

The Washington State Apprenticeship and Training Council (WSATC) has the authority to develop, administer, and enforce apprenticeship program standards (Standards) for the operation and success of an apprenticeship and training program in the State of Washington. Apprenticeship programs and committees function, administer, or relinquish authority only with the consent of the WSATC and only apprentices registered with the supervisor or recognized under the terms and conditions of a reciprocal agreement will be recognized by the WSATC. Parties signatory to these Standards declare their purpose and policy is to establish and sponsor an organized system of registered apprenticeship training and education.

These Standards are in conformity and are to be used in conjunction with the Apprenticeship Rules, Chapter 296-05 WAC (Washington Administrative Code); Apprenticeship Act, Chapter 49.04 RCW (Revised Code of Washington); The National Apprenticeship Act, 29 U.S.C. (United States Code) 50; Apprenticeship Programs, Title 29 Part 29 CFR (Code of Federal Regulations); and Equal Employment Opportunity in Apprenticeship and Training, Title 29 Part 30 CFR which govern employment and training in apprenticeable occupations. They are part of this apprenticeship agreement and bind all signers to compliance with all provisions of registered apprenticeship. Additional information may need to be maintained by the program that is supplemental to these apprenticeship standards. This information is for purposes of ensuring compliance with decisions of the WSATC and the apprenticeship laws identified above.

If approved by the council, such amendment/s and such changes as adopted by the council shall be binding to all parties. Sponsors shall notify apprentices of changes as they are adopted by the council. If and when any part of these Standards becomes illegal, as pertains to federal and/or state law, that part and that part alone will become inoperative and null and void, and the Department of Labor and Industries (L&I) may adopt language that will conform to applicable law. The remainder of the Standards will remain in full force and effect.

See WAC 296-05-003 for the definitions necessary for use with these Standards.

The individuals selected for this program would work for the LOTT Alliance (hereinafter referred to as the "LOTT") at the LOTT Alliance treatment facilities. The program offers the apprentice on-the-job training in the operation and maintenance of wastewater treatment plants and reclaimed water production facilities; in a field of great demand for the foreseeable future. In return, the individuals must apply themselves to obtain necessary outside training as outlined, to assure successful completion of required certification exams.

I. GEOGRAPHIC AREA COVERED:

The sponsor has no authority to conduct training outside of the geographical area covered by these Standards. The sponsor may enter into an agreement (portability agreements – see WAC 296-05-303(3)) with other apprenticeship committees for the use of apprentices by training agents that are working outside their approved geographic area. Also, if a reciprocity agreement (see WAC 296-05-327) is in place, the out-of-state sponsor may

use their registered apprentices. The sponsor will ensure compliance with the provisions of any agreement recognized by the WSATC.

The area covered by these Standards shall be Thurston County, Washington.

II. MINIMUM QUALIFICATIONS:

Minimum qualifications must be clearly stated and applied in a nondiscriminatory manner (see WAC 296-05-316).

Age:	**All applicants must be at least 18 years of age**
Education:	**High school diploma or certificate of equivalency**
Physical:	**Must be able to meet the requirements of the occupation**
Testing:	**None**
Other:	**Must possess a valid driver license and be able to obtain a valid Washington driver license within 30 days of employment.**

III. CONDUCT OF PROGRAM UNDER WASHINGTON EQUAL EMPLOYMENT OPPORTUNITY PLAN:

Sponsors with five (5) or more apprentices must adopt an Equal Employment Opportunity (EEO) Plan and Selection Procedures (see Part D of Chapter 296-05 WAC and 29 CFR Part 30).

The recruitment, selection, employment and training of apprentices during their apprenticeship shall be without discrimination because of race, sex, color, religion, national origin, age, disability or as otherwise specified by law. The sponsor shall take positive action to provide equal opportunity in apprenticeship and will operate the apprenticeship program as required by the rules of the Washington State Apprenticeship and Training Council and Title 29, Part 30 of the Code of Federal Regulations. (WAC 296-05-316(3))

A. Selection Procedures:

Exempt per WAC 296-05-405(1)(a) for programs with fewer than five apprentices

B. Equal Employment Opportunity Plan:

Exempt per WAC 296-05-405(1)(a) for programs with fewer than five apprentices

Discrimination Complaints.
Any apprentice or applicant for apprenticeship who believes they have been discriminated against may file a complaint (WAC 296-05, Part D).

IV. TERM of APPRENTICESHIP:

The minimum term of apprenticeship must not be less than 2000 hours or 12 months of work experience in each occupation identified in these Standards as apprenticeable. The term of apprenticeship must be stated in hours or months of employment.

Control Systems Technician and Maintenance Technician:

The term of apprenticeship shall not be less than 6000 hours of reasonably continuous employment.

Wastewater Treatment Plan Operator

The term of apprenticeship shall not be less than 5000 hours of reasonably continuous employment. Prior to becoming a journey-level worker, the apprentice must successfully complete the state exam for certification as a water pollution control plant operator for Group II Plants.

V. INITIAL PROBATIONARY PERIOD:

All apprentices are subject to an initial probationary period, stated in hours or months of employment for which they receive full credit toward completion of apprenticeship. Advance credit/standing will not reduce the initial probationary period. The initial probationary period:

- Is the period following the apprentice's acceptance into the program and during which the apprentice's appeal rights are impaired. The initial probation must not exceed twenty percent (20%) of the term of apprenticeship unless an exemption by the WSATC has been granted for longer probationary periods as specified by Civil Service or law.

- Is the period that the WSATC or the supervisor of apprenticeship may terminate an apprenticeship agreement at the written request by any affected party. The

sponsor or the apprentice of the apprenticeship agreement may terminate the agreement without a hearing or stated cause. An appeal process is available to apprentices who have completed the initial probationary period.

All apprentices employed in accordance with these Standards shall be subject to a probationary period of the first 1000 hours of employment.

VI. RATIO OF APPRENTICES TO JOURNEY LEVEL WORKERS:

Supervision is the necessary education, assistance, and control provided by a journey-level employee that is on the same job site at least seventy-five percent of each working day, unless otherwise approved by the WSATC. The sponsor will assure that apprentices are under the supervision of competent and qualified journey-level workers on the job who are responsible for the work being performed, to ensure safety and training in all phases of the work. Apprentices will work the same hours as journey-level workers, EXCEPT where such hours may interfere with related/supplemental instruction. (see WAC 296-05-316(5))

A. In order to assure adequate supervision of all apprentices the following ratio will be observed: one (1) apprentice to one (1) journey-level worker per shift. Should it become necessary to lay off an apprentice, he/she shall be offered reemployment before a new apprentice may be hired.

B. Journey-level workers approved for supervising the Apprentice Control Systems Technician:

1. **Control Systems Technician**
2. **Instrument/Electrical Technician**
3. **Systems and Applications Specialist**
4. **Industrial Electrician**

VII. APPRENTICE WAGES and WAGE PROGRESSION:

The apprentice will be paid a progressively increasing schedule of wages based on specified percentages of journey-level wage consistent with skills acquired. These may be indicated in hours or monthly periods set by the sponsor. The entry wage will not be less than the minimum wage prescribed by the Fair Labor Standards Act, where applicable, unless a higher wage is required by other applicable federal law, state law, respective regulations, or by collective bargaining agreement.

The sponsor may accelerate, by an evaluation process, the advancement of apprentices who demonstrate abilities and mastery of the occupation to the level for which they are

qualified. When the apprentice is granted advanced standing the sponsor must notify the employer/training agent of the appropriate wage per the wage progression schedule specified in these Standards.

Apprentices shall be paid according to the following percentages of the journey-level worker wage rate, plus all fringe benefits, based on the committee's recommendation to advance.

Control Systems Technician and Maintenance Technician

Step/**Period**	Number of approximate hours	Percentage of journey-level rate
1	**0000 – 1000 hours**	**75%**
2	**1001 – 2000 hours**	**79%**
3	**2001 – 3000 hours**	**83%**
4	**3001 – 4000 hours**	**87%**
5	**4001 - 5000 hours**	**91%**
6	**5001 - 6000 hours**	**95%**

Wastewater Treatment Plant Operator:

Step/**Period**	Number of approximate hours	Percentage of journey-level rate
1	**0000 – 1000 hours**	**75%**
2	**1001 – 2000 hours**	**80%**
3	**2001 – 3000 hours**	**85%**
4	**3001 – 4000 hours**	**90%**
5	**4001 - 5000 hours**	**95%**

VIII. WORK PROCESSES:

The apprentice shall receive on the job instruction and experience as is necessary to become a qualified journey-level worker versed in the theory and practice of the occupation covered by these Standards. The following is a condensed schedule of work experience, which every apprentice shall follow as closely as conditions will permit.

Employers/training agents shall only use registered apprentices to perform the work processes as stated in this section. (WAC 296-05-003 - Definitions)

A. Control Systems Technician — Approximate Hours

1. Wastewater Process/Facility Familiarization 240

- **a. Pretreatment: screening, grit removal, influent pumping, equalization**
- **b. Primary Treatment: clarification/settling, scum removal, chains and flights, pumping**
- **c. Secondary Treatment: anoxic/aeration zones, flow patterns, blowers, recirculation pumping**
- **d. Secondary Clarifiers: RAS/WAS, scum skimmers**
- **e. UV Disinfection**
- **f. Effluent Pumping**
- **g. Water Reclamation/Sand filter**
- **h. Dissolved air floatation tanks**
- **i. Digesters**
- **j. Centrifuge**
- **k. Methane Gas System**
- **l. Air Scrubbers**
- **m. Heat Recovery Systems**
- **n. Laboratory**
- **o. Administration**
- **p. Martin Way Satellite Reclamation Plant**
- **q. Hawks Prairie Recharge Basins**
- **r. Pump Stations**
- **s. Reclaimed Water Distribution**

2. Safety/Departmental Procedures.....180

- **a. Safety Rules and Regulations: equipment usage, personal protective equipment, records, health and safety manual**
- **b. Safety Procedures: obtaining aid, entering hazardous areas and confined spaces, driving, equipment lockout/tag-out**
- **c. Safety Hazards: housekeeping, electrical, chemical, gases**
- **d. Safety Training: first aid including CPR and AED, MSDS, fire extinguishers, safety meetings**
- **e. Forklift**
- **f. Emergency Response Board**

g. Rules/Procedures: timesheets, leave requests, call-in

3. Use and Care of Hand and Power Tools.....80

4. Basic Electrical Systems and Electricity.....400
- **a. Electrical Codes and Regulations**
- **b. Electrical Safety and Protection**
- **c. Direct Current Fundamentals**
- **d. Alternating Current Fundamentals**
- **e. Single Phase Systems**
- **f. Three Phase Systems**
- **g. Transformers**
- **h. Motor Starters**
- **i. Solenoids**
- **j. Relays**
- **k. Electrical Troubleshooting**

5. Process Control Devices. 150
- **a. Valve Controller**
- **b. Pneumatics**
- **c. Hydraulics**
- **d. Motor Operated Valve Positioners/Actuators**
- **e. Variable Frequency Drives**

6. Electronics. 400
- **a. Digital-Analog Signals**
- **b. Solid State**
- **c. 420 Milliamp Circuits**

7. Electronic Testing Equipment. 150
- **a. Multimeter**
- **b. Optical Time Domain Reflectometer (OTDR)**
- **c. Network Testing Equipment**
- **d. Oscilloscope**
- **e. Loop Simulator**
- **f. Calibrators**

8. Level Measurement/Instrumentation.....150
- **a. Selection/Types (Ultrasonic, Bubbler, Radar, Pressure Differential, Manometers)**
- **b. Transducers**
- **c. Installation**
- **d. Calibration**
- **e. Maintenance**
- **f. Troubleshooting**
- **g. Repair/Replace**

9. Pressure Measurement/Instrumentation. 150
- **a. Selection/Types (Bellows, Bordon Tube Gauges)**
- **b. Transducers**
- **c. Installation**
- **d. Calibration**
- **e. Maintenance**
- **f. Troubleshooting**
- **g. Repair/Replace**

10. Temperature Measurement/Instrumentation. 40
- **a. Selection/Types (Thermocouple, Thermistor, Resistance Temperature Detector)**
- **b. Installation**
- **c. Calibration**
- **d. Maintenance**
- **e. Troubleshooting**
- **f. Repair/Replace**

11. Flow Measurement/Instrumentation. 150
- **a. Selection/Types (Mag-meter, Parshall Flume, Differential Pressure, Orifice Plate, Venturi, Ultrasonic Flow Meter)**
- **b. Transducer**
- **c. Installation**
- **d. Calibration**
- **e. Maintenance**
- **f. Troubleshooting**
- **g. Repair/Replace**

12. Miscellaneous Instrumentation and Analyzers. 400
- **a. Selection/Types (Turbidity, pH, ORP, Dissolved Oxygen, Nutrients, Residual Chlorine, Suspended Solids, etc.)**
- **b. Installation**
- **c. Calibration**
- **d. Maintenance**
- **e. Troubleshooting**
- **f. Repair/Replace**

13. Automatic Control Systems. 1000
- **a. Programmable Logic Controllers**
- **b. Single Loop Controllers**
- **c. Distributed Control Systems**
- **d. Human-Machine Interfaces**
- **e. Installation**
- **f. Maintenance**
- **g. Troubleshooting**

h. Repair/Replace

14. Communications Equipment and Systems. 1000
- **a. Selection/Types (Bus Networking, PC Networking, Telemetry)**
- **b. Installation**
- **c. Maintenance**
- **d. Troubleshooting**
- **e. Cable Tester**
- **f. Repair/Replace**

15. Computers, Peripherals, Software 1000
- **a. Installation**
- **b. Troubleshooting**
- **c. Office and Business Applications**
- **d. Operating Systems (DOS, Windows, Unix, etc.)**
- **e. Databases (SQL Server)**
- **f. Client/Server**

16. Research and Documentation 360
- **a. Autocad**
- **b. Visio**
- **c. Equipment Manuals**
- **d. Equipment Research and Specification**

17. Training User Groups.....150

Total Hours: 6000

B. Maintenance Technician ..... Approximate Hours

1. Wastewater Process/Facility Familiarization 150

- **a. Pretreatment: screening, grit removal, influent pumping, equalization**
- **b. Primary Treatment: clarification/settling, scum removal, chains and flights, pumping**
- **c. Secondary Treatment: anoxic/aeration zones, flow patterns, blowers, recirculation pumping**
- **d. Secondary Clarifiers: RAS/WAS, scum skimmers**
- **e. UV Disinfection**
- **f. Effluent Pumping**
- **g. Water Reclamation/Sand filter**
- **h. Dissolved air floatation tanks**
- **i. Digesters**
- **j. Centrifuge**
- **k. Methane Gas System**
- **l. Air Scrubbers**
- **m. Heat Recovery Systems**
- **n. Laboratory**
- **o. Administration**
- **p. Martin Way Satellite Reclamation Plant**
- **q. Hawks Prairie Recharge Basins**
- **r. Pump Stations**
- **s. Reclaimed Water Distribution**

2. Use and Care of Hand Tools 250

- **a. Wrenches**
- **b. Drills, Taps, and Dies (metric and SAE)**
- **c. Saws, all types**
- **d. Files**
- **e. Hammers, all types**
- **f. Pry Bar**
- **g. Gear Pullers, screw and hydraulic**
- **h. Bearing Scraper**
- **i. Reamers**
- **j. Squares, steel and combination**
- **k. Rules and Tapes**
- **l. Plane**
- **m. Chisel and Bits**
- **n. Pliers and Cutters**
- **o. Level and Plumb Bob**
- **p. Screw Drivers**
- **q. Drifts, Punches**
- **r. Silver and Soft Soldering**
- **s. Burning and Heating**

- **t. Packing Pullers**
- **u. Gasket cutting**

3. Use and Care of Power Tools.....300
- **a. Drill Press**
- **b. Chipping**
- **c. Portable Drills**
- **d. Power Hack Saw**
- **e. Hydraulic Press**
- **f. Grinder**
- **g. Band Saw**
- **h. Table Saw**
- **i. Jointer**
- **j. Bolt Threader**
- **k. Jack Hammer**
- **l. Stud Gun**
- **m. Pneumatic Impact Wrench**

4. Precision Tools and Testing Equipment 200
- **a. Feeler gauges**
- **b. Dial Indicators/Calipers**
- **c. Micrometers, inside and outside**
- **d. Explosive Gas Meter**

5. Rigging 50
- **a. Slings**
- **b. Ladders**
- **c. Chain Blocks**
- **d. A-frames and Stiff Legs**
- **e. Screw and Hydraulic Jacks**
- **f. Overhead Cranes**
- **g. Crane/Ground Signals**

6. Safety/Departmental Procedures.....250
- **a. Safety rules and Regulations: equipment usage, personal protective equipment, records, health and safety manual**
- **b. Safety Procedures: obtaining aid, entering hazardous areas and confined spaces, driving, equipment lockout/tag-out**
- **c. Safety Hazards: housekeeping, electrical, chemical, gases**
- **d. Safety Training: first aid including CPR and AED, MSDS, fire extinguishers, safety meetings**
- **e. Forklift**
- **f. Emergency Response Board**
- **g. Rules/Procedures: timesheets, leave requests, call-in**

7. Layout/Project Planning 250

- **a. Layout of Simple Geometric Figures and Transitions**
- **b. Coordinating Work**
- **c. Procedures**

8. Power Transmission Equipment 400
- **a. Belts: "V" and Flat, Powerbands**
- **b. Chains: roller and silent**
- **c. Gear Reducers**
- **d. Sole Plates and Foundations**
- **e. Adjusting Gear Clearances, lash and thrust**
- **f. Coupling Alignment, laser and dial**
- **g. Rope Drive and rope splicing**

9. Bearings 400
- **a. Identification**
- **b. Plain and Antifriction**
- **c. Inspection**
- **d. Installing and Dismantling**
- **e. Roller and Taper**
- **f. Use of Bearing Heaters**

10. Pumps.....600
- **a. General Knowledge of Operation and Type**
- **b. Packing**
- **c. Dismantling, Parts Replacement, Reassembling**
- **d. Mechanical Seals**
- **e. Installation**
- **f. Troubleshooting**

11. Equipment Installation.....400
- **a. Layout**
- **b. Setting of equipment**
- **c. Leveling**
- **d. Alignment**

12. Hydraulics/Pneumatics.....960
- **a. Screw Compressors**
- **b. Single Valve Compressors**
- **c. Air Lines**
- **d. Compressor Rebuild**
- **e. Troubleshooting**
- **f. Codes and Regulations**

13. Technical Reading.....50
- **a. Blueprints and schematics**
- **b. CAD drawings**

- **c. Technical manuals**
- **d. Research**

14. Boilers (non-steam) 500

15. Pipefitting 300
- **a. Threaded**
- **b. Welded**

16. HVAC 200
- **a. Refrigeration**
- **b. Sheet metal**
- **c. R22, R12**
- **d. Motor Vehicle Air Conditioning**
- **e. Universal License**

17. Preventive Maintenance 400
- **a. Strategic Asset Management Program**
- **b. Computerized Maintenance Management System**

18. Welding 300
- **a. Tungsten Inert Gas (aluminum, stainless, pipe)**
- **b. Metal Inert Gas (mild steel to ¾ inch with 045, all position)**
- **c. Shielded Metal Arc Welding (mild steel to ½ inch, 7018, all position)**
- **d. Acetylene Torch (cutting to 1 inch mild steel)**
- **e. Materials/metals**

19. Computers 40
- **a. Mainsaver CMMS**
- **b. Email**
- **c. Internet**

Total Hours: 6000

C. Wastewater Treatment Plant Operator: Approximate Hours

1. Basic Wastewater Treatment.....150
- **a. Source of wastewater**
- **b. Types of wastewater**
- **c. Collection methods**
- **d. Hazards of wastewater**
- **e. Unit locations**
- **f. Organizational Structure and personnel policies**

2. Pre-Treatment Processes.....300
- **a. Screening**
  - **Bar screens - operation and control**
  - **Screening debris management**
- **b. Grit Removal**
  - **Channel design aeration control**
  - **Pumping and hauling**
- **c. Influent pumping**
  - **Pump controls**
  - **Wet well function and use**
  - **Equalization basin and use**
  - **Flow meters**

3. Primary Treatment.....300
- **a. Solids settling and removal**
  - **Pumping -sequence and controls**
  - **Chains and flights: purpose and operation**
- **b. Scum removal**
  - **Collection unit: operation and precautions**
  - **Scum thickening and pumping**
  - **Scum disposal**
- **c. Flow control**
  - **Influent gates and baffles**
  - **Effluent operation: Conventional and Nutrient Removal**
  - **Principle of operation**

4. Secondary & Tertiary Treatment.....600
- **a. Secondary Treatment**
  - **Activated sludge process**
  - **Waste Activated Sludge (WAS)**
  - **Return Activated Sludge (RAS)**
- **b. Secondary Clarification**
  - **Clarification process**
  - **Scum system**

- **Role in WAS & RAS**

c. Tertiary Treatment
- **Biological nutrient removal**
- **Anoxic systems**
- **Flow patterns**

d. Chemical addition systems
- **Methanol**
- **Caustic Soda**
- **Polymer**

e. Aeration System
- **Blowers**
- **Diffusers**
- **Controls**

f. Intermediate Pumping
- **Role in treatment process**
- **Operation & control**

5. Disinfection 100
- **a. Ultra - Violet system**
- **b. UV basins and hydraulic flow path**
- **c. Destruction of pathogens**
- **d. Principles of operation**

6. Water Reclamation 250
- **a. Class A reclaimed water**
- **b. Coagulation**
- **c. Filtration**
- **d. Disinfection**
- **e. Distribution system**

7. Effluent Pumping 100
- **a. Flow patterns**
- **b. Method of control**
- **c. Tidal and storm effects**
- **d. Pumping operation and controls**
  - **CSO events**
- **e. Fiddlehead discharge**

8. Solids Handling 800

a. Sludge Thickening
- **Flotation thickener operation**
- **Centrifuge operation**
- **Chemical additions**
- **Pumping Systems**
- **Control tests and evaluations**

b. Sludge digestion
- **Feeding sequence determination**
- **Level control**
- **Mixing operation and strategy**

c. Biosolids disposal
- **Centrifuged biosolids conveyance**
- **Truck loading and operation**
- **Disposal point operation**
- **Biosolids transportation**

9. Methane Gas Utilization 150
- **a. Engine generator operation**
- **b. Boiler operation**
- **c. Waste gas burner operation**
- **d. Scrubber operation**

10. Laboratory.....200
- **a. Analysis**
  - **Equipment**
  - **Chemical reagents**
  - **Biology and chemistry**
- **b. Sample collection**
  - **Sample points**
  - **Sampling methods**
  - **Sample accuracy**
  - **Sample preservation storage**
- **c. Visual observations**
  - **Physical**
  - **Odor control effects**
- **d. In-lab OJT**
- **e. Receiving waters**

11. Process Control 350
- **a. Pretreatment system**
- **b. Primary treatment system**
- **c. Secondary treatment system**
- **d. Sludge thickening**
- **e. Sludge digestion**
- **f. Methane Utilization**
- **g. Chemical additions**
- **h. Disinfection**
- **i. Pumping systems**
- **j. Interrelation of above processes**
- **k. Instrument familiarization**

12. Heat Recovery Systems.....150

- **a. High Heat loop**
  - **Inputs**
  - **Outputs**
  - **Method of heat transfer**
  - **System variables**
- **b. Low Heat loop**
  - **Inputs**
  - **Outputs**
  - **Method of heat transfer**
  - **System variables**
- **c. Equipment use selection**
  - **Selection of equipment to run**
  - **Capacity of various units**
  - **Determining maximum efficiency**

13. Maintenance 200

- **a. Maintenance of buildings and grounds**
  - **Use of equipment**
  - **Methods used**
  - **Maintenance scheduling**
- **b. Maintenance of equipment**
- **c. Preventive maintenance**
  - **Reasons for preventative maintenance**
  - **System scheduling**
  - **Communications**
- **d. In-shop OJT**

14. Safety.....200

- **a. Safety rules and regulation**
  - **Equipment usage**
  - **Personal protection equipment**
  - **Records**
  - **Health and safety manual**
- **b. Safety procedures**
  - **Obtaining aid**
  - **Entering hazardous areas and confined spaces**
  - **Identifying hazardous areas**
  - **Driving**
  - **Equipment lockout/tagout**
  - **Boating**
- **c. Safety hazards**
  - **Housekeeping**
  - **Electrical**
  - **Chemical**

- **Gases**

d. Safety Training

15. Record keeping.....200

a. Maintenance records
- **Mainsaver™ CMMS**

b. Process control
- **Test results**
- **Equipment log**
- **Daily log**

c. Timekeeping
- **Timesheet**
- **Apprentice Checklist**

Martin Way Pump Station

16. Station Operations 100

a. Source of wastewater
b. Screening
c. Pumping to SRP
d. Operations

Satellite Reclamation Plant

17. Grit Pumping.....40

18. Sequencing Batch Reacter.....120

a. RAS
b. WAS
c. Blowers
d. Operations

19. Control Systems 120

20. Membrane Bio-Reactor 400

a. Operations
b. Cleaning

21. Odor Control Systems 40

22. Storm Water 10

23. Class A Reclaimed Water.....40

a. Production
b. Conveyance

Hawks Prairie Ponds

24. Controls & Management.....40

25. General.....40

- **a. Water Systems**
- **b. Air Systems**
- **c. Fire & Safety Systems**
- **d. Lighting & Electrical**
- **e. Sampling**
- **f. Other**

TOTAL HOURS: 5000

IX. RELATED/SUPPLEMENTAL INSTRUCTION:

The apprentice must attend related/supplemental instruction. Time spent in related/supplemental instruction will not be considered as hours of work, and the apprentice is not to be paid for time so spent, unless otherwise stated in these Standards.

The sponsor/training agent must provide for instruction of the apprentice during the related/supplemental instruction in safe and healthful work practices in compliance with the Washington Industrial Safety and Health Act, and applicable federal and state regulations.

In case of failure on the part of any apprentice to fulfill this obligation, the sponsor has authority to take disciplinary action (see Administrative/Disciplinary Procedures section).

Clock hours of actual attendance by the apprentice in related/supplemental instruction classes at the community/technical college or other approved training locations shall be reported to L&I on a quarterly basis for verifying attendance and industrial insurance purposes.

For industrial insurance purposes, the WSATC will be considered as the employer should any apprentice, not being paid to attend, sustain an injury while participating in related/supplemental classroom activity, or other directly related activity outside the classroom. The activities must be at the direction of the instructor.

The methods of related/supplemental training must consist of one or more of the following:

( ) Supervised field trips

(X) Approved training seminars

(X) A combination of home study and approved correspondence courses
Control Systems Technician and Maintenance Technician
TPC Training Systems

(X) State Community/Technical college
Control Systems Technician and Maintenance Technician
Clover Park Technical College

Wastewater Treatment Operators
South Puget Sound and Green River Community Colleges

( ) Private Technical/Vocational college

( ) Training trust

(X) Other (specify): **Required LOTT Training**

144 Minimum RSI hours per year, (see WAC 296-05-305(5))
Additional Information:

Maintenance Technician:

Must obtain at least one certificate from each of the two areas below:

Certification Area A

- **Refrigerant Recovery Certification (USEPA)**
- **Cross-connection/Backflow Prevention Certification**

Certification Area B

- **Tungsten Inert Gas Welding**
- **Metal Inert Gas Welding**
- **Shielded Metal Arc Welding**

X. ADMINISTRATIVE/DISCIPLINARY PROCEDURES:

Sponsors may include in this section requirements and expectations of the apprentices and training agents and an explanation of disciplinary actions that may be imposed for noncompliance. The sponsor has the following disciplinary procedures that they may impose: Disciplinary Probation, Suspension, or Cancellation.

Disciplinary Probation: A time assessed when the apprentice's progress is not satisfactory. During this time the program sponsor may withhold periodic wage advancements, suspend or cancel the apprenticeship agreement, or take further disciplinary action. A disciplinary probation may only be assessed after the initial probation is completed. During the disciplinary probation, the apprentice has the right to file an appeal of the committee's action with the WSATC (as described in WAC 296-05-009).

Suspension: A suspension is a temporary interruption in progress of an individuals apprenticeship program that may result in the cancellation of the Apprenticeship Agreement. Could include temporarily not being allowed to work, go to school or take part in any activity related to the Apprenticeship Program until such time as the Apprenticeship Committee takes further action.

Cancellation: Refers to the termination of an apprenticeship agreement at the request of the apprentice, supervisor, or sponsor. (as described in WAC 296-05-009).

A. General Procedures

In case of failure on the part of any apprentice to fulfill his/her obligations as to school attendance or advancement, the Apprenticeship Committee shall have authority to suspend or revoke his/her Agreement. The apprentice agrees to abide by any such determination of said Committee.

Failure to maintain employment with LOTT Alliance will result in cancellation of the apprenticeship agreement.

B. Local Apprenticeship Committee Policies

None

C. Complaint and Appeal Procedures:

All approved programs must establish procedures explaining the program's complaint review process. Complaints that involve matters covered by a collective bargaining agreement are not subject to the complaint review procedures in this section. Complaint (after initial probation completed) – WAC 296-05-009 and 296-05-316(21)

Prior to: 20 days of intention of disciplinary action by a committee/organization

- Committee/organization must notify the apprentice in writing of action to be taken
- Must specify the reason(s) for discipline, suspension, or cancellation
- Decision will become effective immediately
- Written reason(s) for such action will be sent to the apprentice

Within: 30 days request for reconsideration from the committee

- Apprentice to request local committee to reconsider their action

Within: 30 days of apprentice's request for reconsideration

- Local committee/organization must provide written notification of their final decision

If apprentice chooses to pursue the complaint further:

Within: 30 days of final action

- Apprentice must submit the complaint in writing to the supervisor (L&I)
- Must describe the controversy and provide any backup information
- Apprentice must also provide this information to the local committee/organization

Within: 30 days for supervisor to complete investigation

- If no settlement is agreed upon during investigation, then supervisor must issue a written decision resolving the controversy when the investigation is concluded

If the apprentice or local committee/organization disputes supervisor decision:

Within: 30 days of supervisor's decision, request for WSATC hearing

- Request must be in writing
- Must specify reasons supporting the request
- Request and supporting documents must be given to all parties
- WSATC must conduct the hearing in conjunction with the regular quarterly meeting

Within: 30 days after hearing

- WSATC to issue written decision

XI. COMMITTEE – RESPONSIBILITIES AND COMPOSITION

NOTE: The following is an overview of the requirements associated with administering an apprenticeship committee and/or program. These provisions are to be used with the corresponding RCW and/or WAC.

The sponsor is the policymaking and administrative body responsible for the operation and success of this apprenticeship program. A committee is responsible for the day-to-day operations of the apprenticeship program and they must be knowledgeable in the process of apprenticeship and/or the application of Chapter 49.04 RCW and Chapter 296-05 WAC. Sponsors must develop procedures for:

A. Committee Operations (WAC 296-05-316): (Not applicable for Plant Programs) Convene meetings at least three times per year of the program sponsor and apprenticeship committee attended by a quorum of committee members as defined in the approved Standards. If the committee does not indicate its definition of quorum, the interpretation will be "50% plus 1" of the approved committee members. Conference call meetings may be conducted in lieu of regular meetings but must not exceed the number of attended meetings and no disciplinary action can be taken during conference call meetings.

B. Program Operations (Chapter 296-05 WAC - Part C & D):

1. The sponsor will record and maintain records pertaining to the local administration of the apprenticeship program and make them available to the WSATC or its representative on request.

Records required by WAC 296-05-400 through 455 (see Part D of Chapter 296-05 WAC) will be maintained for five (5) years; all other records will be maintained for three (3) years.

2. The sponsor will submit to L&I through the assigned state apprenticeship coordinator the following list:

   Forms are available on line at http://www.LNI.wa.gov/scs/apprenticeship or from your assigned apprenticeship coordinator.
   - Apprenticeship Agreement Card – within first 30 days of employment
   - Authorization of Signature - as necessary
   - Authorized Training Agent Agreements (committee approving or canceling) – within 30 days
   - Apprenticeship Committee Meeting Minutes – within 30 days of meeting (not required for Plant program)
   - Change of Status – within 30 days of action by committee, with copy of minutes
   - Journey Level Wage – at least annually, or whenever changed
   - Revision of Standards and/or Committee Composition - as necessary
   - RSI (Quarterly) Reports:
     1st quarter: January through March, by April 10
     2nd quarter: April through June, by July 10
     3rd quarter: July through September, by October 10
     4th quarter: October through December, by January 10

3. Adopt, as necessary, local program rules or policies to administer the apprenticeship program in compliance with these Standards that must be submitted for L&I approval and updating these Standards. The L&I apprenticeship program manager may administratively approve requests for revisions in the following areas of the Standards:
   - Program name
   - Section III: Conduct of Program Under Washington Equal Employment Opportunity Plan
   - Section VII: Apprentice Wages and Wage Progression
   - Section IX: Related/Supplemental Instruction
   - Section XI: Committee - Responsibilities and Composition (including opening statements)
   - Section XII: Subcommittees
   - Section XIII: Training Director/Coordinator

C. Management of Apprentices:

1. Each apprentice (and, if under 18 years of age, the parent or guardian) will sign an apprenticeship agreement with the sponsor, who will then register the agreement, with L&I before the apprentice attends the related/supplemental instruction classes, or within the first 30 days of employment as an apprentice. For the

purposes of industrial insurance coverage and prevailing wage exemption under RCW 39.12.021, the effective date of registration will be the date the agreement is received by L&I.

L&I must be notified within 30 days of program approval, of all requests for disposition or modification of agreements, with a copy of the committee minutes approving the changes, which may be:

- Certificate of completion
- Additional credit
- Suspension (i.e. military service or other)
- Reinstatement
- Cancellation and/or
- Corrections

2. Rotate apprentices in the various processes of the skilled occupation to ensure the apprentice is trained to be a competent journey-level worker.

3. Periodically review and evaluate apprentices before advancement to the apprentice's next wage progression period. The evidence of such advancement will be the record of the apprentice's progress on the job and during related/supplemental instruction.

4. The sponsor has the obligation and responsibility to provide, insofar as possible, continuous employment for all apprentices in the program. The sponsor may arrange to transfer an apprentice from one training agent to another, or to another sponsor when the sponsor is unable to provide reasonably continuous employment, or they are unable to provide apprentices the diversity of experience necessary for training and experience in the various work processes as stated in these Standards. The new sponsor or training agent will assume all the terms and conditions of these Standards. If, for any reason, a layoff of an apprentice occurs, the apprenticeship agreement will remain in effect unless canceled by the sponsor.

5. An apprentice who is unable to perform the on-the-job portion of apprenticeship training may, if the apprentice so requests and the sponsor approves, participate in related/supplemental instruction, subject to the apprentice obtaining and providing to the sponsor written requested document/s for such participation. However, time spent will not be applied toward the on-the-job portion of apprenticeship training.

6. Hear and adjust all complaints of violations of apprenticeship agreements.

7. Upon successful completion of apprenticeship, as provided in these Standards, and passing the examination that the sponsor may require, the sponsor will recommend that the WSATC award a Certificate of Completion of Apprenticeship. The program will make an official presentation to the apprentice that has successfully completed his/her term of apprenticeship.

D. Training Agent Management:

1. Offer training opportunities on an equal basis to all employers and apprentices. Grant equal treatment and opportunity for all apprentices through reasonable working and training conditions and apply those conditions to all apprentices uniformly. Provide training at a cost equivalent to that incurred by currently participating employers and apprentices. Not require an employer to sign a collective bargaining agreement as a condition of participation.

2. Determine the adequacy of an employer to furnish proper on-the-job training in accordance with the provisions of these Standards. Require all employers requesting approved training agent status to complete an approved training agent agreement and comply with all federal and state apprenticeship laws and the appropriate apprenticeship Standards.

3. Submit approved training agent agreements to the department with a copy of the agreement and/or the list of approved training agents within thirty days of committee approval. Submit rescinded approved training agent agreements and/or the list of approved training agents to the department within thirty days of said action.

E. Composition of Committee: (see WAC 296-05-313)

Apprenticeship committees must be composed of an equal number of management and non-management representatives composed of at least four members but no more than twelve. If the committee does not indicate its definition of a quorum, the interpretation will be "50% plus 1" of the approved committee members.

Apprenticeship committees shall elect a chairperson and a secretary who shall be from opposite interest groups, i.e., chairperson-employers; secretary-employees, or vice versa; EXCEPT, this does not apply where the Registration Agency represents the apprentice(s).

For plant programs the WSATC or the department designee will act as the employee representative.

The Apprenticeship Committee shall be composed of five (5) members representing the employers and five (5) members representing the employees. At least two of the members representing the employees shall be journey-level Wastewater Treatment Plant Operators. The members of the Committee shall be selected by the groups they represent.

A quorum shall consist of at least three (3) members representing the employer and three (3) members representing the employees.

LOTT ALLIANCE APPRENTICESHIP COMMITTEE

Program type administered by the committee: **Individual Joint**

The employer representatives shall be:

Laurie Pierce, Chair
500 North Adams
Olympia, WA 98501

Ben McConkey
500 North Adams
Olympia, WA 98501

Howard Weisberg
111 Market St NE, Ste 250
Olympia, WA 98501

Wayne Robinson
500 North Adams
Olympia, WA 98501

Mike Seelig
500 North Adams
Olympia, WA 98501

The employee representatives shall be:

Shawn Redmond, Secretary
500 North Adams
Olympia, WA 98501

Donna Bradshaw
500 North Adams
Olympia, WA 98501

Rene Herrera
500 North Adams
Olympia, WA 98501

Joe Beyer
500 North Adams
Olympia, WA 98501

Jim Howard
500 North Adams
Olympia, WA 98501

XII. SUBCOMMITTEE:

Subcommittee(s) approved by L&I, represented equally from management and non-management, may also be established under these Standards, and are subject to the main committee. All actions of the subcommittee must be approved by the main committee.

None

XIII. TRAINING DIRECTOR/COORDINATOR:

The sponsor may employ a person(s) as a full or part-time training coordinator(s)/training director(s). This person(s) will assume responsibilities and authority for the operation of the program as are delegated by the sponsor.

None